

MODULE VI

GROUNDWATER MONITORING

VI.A. APPLICABILITY

- VI.A.1. The requirements of this module shall pertain to all approved sumps specified in Table V-1 of Module V of this Permit.
- VI.A.2. A “unit” for the purpose of this Module shall be defined as a Mixed Waste Landfill Cell.
- VI.A.3. For the purpose of this Module, the term “compliance point” shall be defined as wells GW-41, GW-42, GW-67, GW-67R, GW-68, GW-68R, GW-69, GW-69R, GW-70, , GW-118, GW-119, GW-120, GW-121, GW-122, GW-123R, and GW-124 as depicted on Drawing No. 0201-K06 of Attachment II-11, *Facility Drawings*.
- VI.A.4. For the purpose of this Module, the term “monitoring well” shall be defined as the wells identified in Condition VI.A.3 and wells GW-66 and I-1-30.
- VI.A.5. The installation of new monitoring wells shall require a permit modification in accordance with Condition I.D.2 of this Permit.
- VI.A.6. As new land disposal units are completed at the Facility, the groundwater monitoring network associated with the new unit shall be subject to this Module.

VI.B. GROUNDWATER PROTECTION

- VI.B.1. The Permittee shall follow all of the provisions under UAC R315-8-6, Groundwater Protection, and as defined by these permit conditions. For purposes of this permit, UAC R315-8-6 shall apply to all units at the Facility listed in Condition VI.A.1.
- VI.B.2. The Permittee shall submit to the Executive Secretary for approval, a detailed plan for any proposed monitoring wells. The plan shall be submitted at least 30 days prior to initiation of installation.
- VI.B.3. A certified map of the site shall be included with the monitoring well installation plan and shall provide the location of the existing monitoring wells and the unit being monitored.
- VI.B.4. No additions to the monitoring network shall be installed until after the plan has been approved, in writing, by the Executive Secretary.

VI.C. REQUIRED PROGRAMS

- VI.C.1. The Permittee shall conduct a Detection Monitoring Program as outlined in Condition VI.F for all units subject to these provisions.
- VI.C.2. Whenever hazardous constituents described in UAC R315-8-6.4 are detected at any compliance point(s), the Permittee shall follow the requirements of Condition VI.I.
- VI.C.3. Following completion of any required Compliance Monitoring Program or Corrective Action Program, the Permittee shall reinstate the Detection Monitoring Program in accordance with Condition VI.F.

VI.D. GROUNDWATER PROTECTION STANDARD

- VI.D.1. The Executive Secretary shall establish groundwater protection standards for each hazardous constituent that has entered groundwater at the time the Detection Monitoring Program or other evidence indicates that hazardous constituents have entered groundwater beneath a unit.
- VI.D.2. The Executive Secretary may also determine at such time, the hazardous constituents to which the protection standard applies as defined in UAC R315-8-6.4, the concentration limits as defined in UAC R315-8-6.5, the point(s) of compliance under UAC R315-8-6.6, and the compliance period under UAC R315-8-6.7.
- VI.D.3. The compliance period during which the groundwater protection standard applies shall commence upon issuance of this Permit and continue for at least 30 years following certification of closure.
- VI.D.4. If the Permittee is conducting a Corrective Action Program at the end of the 30-year period specified in Condition VI.D.3, or is unable to demonstrate for the last three consecutive years of the 30-year period, that the groundwater protection standard has not been exceeded, the compliance period shall be extended beyond the 30 years until the Permittee demonstrates three years of compliance with the groundwater protection standard.

VI.E. GENERAL GROUNDWATER MONITORING REQUIREMENTS

- VI.E.1. The Permittee shall comply with the following general requirements for groundwater monitoring:
- VI.E.1.a. The Permittee shall install a groundwater monitoring network that consists of a sufficient number of monitoring wells, installed at appropriate locations and

depths, to yield groundwater samples from the uppermost (shallow, unconfined) aquifer that represent the quality of:

- VI.E.1.a.i. background water that has not been affected by leakage from a regulated unit; and
- VI.E.1.a.ii. groundwater passing the point(s) of compliance.
- VI.E.1.b. The Permittee shall follow requirements for measurement of the groundwater surface elevation in accordance with Attachment VI-1, *Groundwater Field Sampling Plan*.
- VI.E.1.c. The Permittee shall develop inferred flow nets from the elevation information. A new flow net shall be developed each year from the annual elevation information.
- VI.E.1.d. The Permittee shall perform an annual survey of the top surface apron elevation of all monitoring wells. For any new monitoring wells, the Permittee shall place permanent survey markers.
- VI.E.1.e. The Permittee shall determine the groundwater flow rate and direction in the uppermost aquifer at least once each year based on groundwater surface elevation measurements.
- VI.E.1.f. The Permittee shall notify the Executive Secretary at least ten days prior to any sampling event required under this permit.
- VI.E.2. The Permittee shall install and maintain a groundwater monitoring network as specified below:
 - VI.E.2.a. All monitoring wells shall be constructed in accordance with the techniques described in the Technical Enforcement Guidance Document (TEGD), OSWER-9950.1, September 1986, and 1992 TEGD Addendum, or latest version, and UAC R315-8-6.8(c).
 - VI.E.2.b. The Permittee shall construct and maintain new monitoring wells in accordance with plans and specifications to be submitted to the Executive Secretary for approval at the time of the permit modification in accordance with Condition VI.B.2.
 - VI.E.2.c. Additional monitoring wells shall be installed to maintain and evaluate compliance if subsurface conditions change after permit issuance. Such changes may include but are not limited to: water level elevation; apparent flow direction changes; or detection of contaminants in a well.
 - VI.E.2.d. Upon notification by the Executive Secretary in writing, or as a result of a compliance action, the Permittee may be required to install and sample additional

monitoring wells at any time during the active life of the Facility, closure periods, post-closure periods, or if new information reveals a need for additional monitoring to protect human health and the environment.

- VI.E.2.e. The Permittee shall submit monitoring well completion reports within 45 days of installation. Completion reports shall include boring logs (representative of samples collected with a shelby tube, split barrel sampler, or rock corer), water level elevations, groundwater contour maps, well development results including recharge rates, cross sections or fence diagrams, and other observations.
- VI.E.2.f. Monitoring wells shall be maintained in an operational condition for the duration of this permit. The Permittee shall notify the Executive Secretary within 72 hours when any well is no longer properly functioning (ex: a change in pumping rate, presence of sandy or silty materials, and cracked or broken casings) or when the Permittee intends to close one or more wells associated with the unit. The Executive Secretary shall approve the conditions for replacement or correction of improperly operating well(s).
- VI.E.2.g. The Permittee shall determine on an annual basis the depth to the bottom of all monitoring wells. This information shall be used in well purging volume calculations.
- VI.E.2.h. All wells removed from the monitoring network shall be plugged and abandoned in accordance with Attachment VI-3, *Permanent Closure of Monitoring Wells*. A written report describing the well plugging and abandonment methods and details shall be submitted to the Executive Secretary within 30 days from the date the wells are removed from the monitoring network.
- VI.E.2.i. The Permittee shall install three monitoring well directly north of sumps 8A and 8B if sumps 9A, 9B, 10A, and 10B are not constructed by December 31, 2005.
- VI.E.3. The Permittee shall use the following techniques and procedures when obtaining samples and analyzing samples from the groundwater monitoring wells:
 - VI.E.3.a. Samples shall be collected by the techniques described in Attachment VI-1, *Groundwater Field Sampling Plan*. Purge water shall be placed in either the Evaporation Tanks, or the Decontamination Pad Tank System. Should purge water placed in the Decontamination Pad Tank System be deemed contaminated based on analytical results, decontamination operations shall cease, and all water in the Decontamination Pad Tank System shall immediately be transferred to the Evaporation Tanks. Purge water from the contaminated well shall no longer be placed in the Decontamination Pad Tank System until corrective action measures have been completed.

- VI.E.3.b. Samples shall be preserved and transported in accordance with the procedures specified in Attachment VI-1, *Groundwater Field Sampling Plan*.
- VI.E.3.c. Samples shall be analyzed according to Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Third Edition or the most current edition, or an equivalent EPA-approved method that has been pre-approved as per Condition I.F.14.a, and the procedures specified in Attachment VI-1, *Groundwater Field Sampling Plan*. All major peaks greater than 25% of the peak height of the closest internal standard will be identified using the latest National Bureau of Standards (NBS) Library. The quantity of these compounds shall be estimated based upon the closest internal standard. Any major peak found during the analysis may become a target parameter. In addition, the following conditions shall be met:
- VI.E.3.c.i. The Permittee shall provide at least one VOA trip blank for each cooler containing samples for VOC analysis. The Permittee shall also provide one set of replicates representing 10% of the total number of samples, one laboratory blank and one VOA pour blank for analysis for each sampling event under the groundwater monitoring program. Any field, trip, or laboratory blanks exceeding three times the method detection limit for any organic parameter shall result in rejection of the data for that parameter for the sample set that the blank represents. Those wells represented by the blank shall be resampled within 30 days from receipt of the original sampling results, for the specified parameter. Qualifiers shall be indicated on all organic laboratory reports when blanks indicate contamination above the method detection level.
- VI.E.3.c.ii. The Executive Secretary may request at any time all Laboratory Quality Assurance/Quality Control documentation and supporting data on any sampling event. The raw organics information for required sampling and analysis, including organics gas-chromatographs, mass spectral analyses, Quality Assurance/Quality Control surrogate and spiking results, etc. shall be retained at the Facility throughout the post-closure care period.
- VI.E.3.c.iii. Samples shall be tracked and controlled using the chain-of-custody procedures specified in Attachment VI-1, *Groundwater Field Sampling Plan*.
- VI.E.3.c.iv. In the case of sample breakage (i.e., during shipping, etc.), resampling shall take place within seven days of the Facility being notified of such an incident. The Permittee shall notify the Executive Secretary prior to resampling.
- VI.F. DETECTION MONITORING PROGRAM
- VI.F.1. The Permittee shall collect, preserve, and analyze groundwater samples pursuant to Condition VI.E.3.

- VI.F.2. Monitoring well sampling shall be conducted on a quarterly basis for the first year after each monitoring well is installed. Following this, sample frequency shall be semi-annual for each monitoring well, unless and until a groundwater protection standard is exceeded in accordance with Condition VI.I.1.
- VI.F.3. For purposes of the Detection Monitoring Program, as specified in Condition VI.F, there shall be two classes of parameters for measurement and analysis:
- VI.F.3.a. Class 1 parameters shall consist of a set of organic hazardous constituents or indicator compounds measurable by gas chromatography/mass spectrometry, listed in Condition VI.L.1. These compounds are a subset of UAC R315-50-10.
- VI.F.3.b. Class 2 parameters shall consist of constituents identified in Condition VI.L.2.
- VI.F.3.c. The Class 1 and Class 2 (excluding those listed in Condition VI.I.1) Groundwater Monitoring Parameters shall be used as the Principal Hazardous Constituents and Indicators.
- VI.F.4. The Permittee shall follow requirements defined in UAC R315-8-6.8.g for establishing background water quality for specified Class 1 and Class 2 parameters.
- VI.F.5. The Permittee shall perform statistical analysis of Class 1 parameters in accordance with Attachment VI-2, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities*, to determine whether Background Detection Levels (BDLVs) have been exceeded.
- VI.F.6. The Permittee shall monitor all Class 2 parameters listed in Condition VI.L.2. at each quarterly or semi-annual sampling event at each monitoring well, except that gross cations and anions shall be measured annually.
- VI.F.7. The Executive Secretary may modify parameters or methods of analysis, including statistical analysis, for any samples upon written notice to the Permittee. Conditions requiring modification may include maintaining or upgrading the quality or type of data produced by the Permittee to account for background conditions; future conditions such as availability of improved analytical methods; the presence of better indicators; or more easily detectable parameters in leachate.
- VI.F.8. The Executive Secretary may prescribe additional sampling and analysis for wastes contained in a unit or leachate deemed appropriate to determine whether a hazardous constituent may have originated from a unit; to establish appropriate monitoring parameters; or for other reasons.
- VI.F.9. The Permittee shall analyze samples from the monitoring wells and any additional required monitoring wells installed in accordance with Condition VI.E.2. The

data shall be submitted to the Executive Secretary according to the schedule found in Condition VI.G.2.

- VI.F.10. The Permittee shall monitor well GW-55 only for the presence of fluids. If fluids are detected, the Permittee shall notify the Executive Secretary within seven days of discovery.

VI.G. REPORTING AND RECORDKEEPING

- VI.G.1. The Permittee shall enter all monitoring, testing and analytical data obtained pursuant to Condition VI.C in the Facility operating record.

- VI.G.2. The Permittee shall submit to the Executive Secretary the analytical results required by Conditions VI.E, VI.F, and VI.J in accordance with the following schedule:

<u>Samples collected during the months of</u>	<u>Semi-annual sampling events</u>	<u>Results due to the Executive Secretary</u>
January-February		April 15
April-May	Jan-June	July 15
July-August		October 15
October-November	July-Dec.	January 15

- VI.G.3. The Permittee shall, within 30 days after the analytical results have been submitted to the Executive Secretary, determine whether there has been statistically significant evidence of contamination.

- VI.G.4. An annual groundwater report shall be submitted to the Executive Secretary no later than March 31st of each year. This report shall contain the following information:

- VI.G.4.i. an updated groundwater contour map, including groundwater surface elevation and flow net data. The updated groundwater contour map shall be based upon the groundwater elevation data collected during the previous year and the most recent aquifer testing designed to determine transmissivity, hydraulic conductivity, and storage characteristics.

- VI.G.4.ii. results of the statistical analysis of BDLVs as specified in Condition VI.F.5.

- VI.G.4.iii. results of the depth to monitoring well bottom measurements required by Condition VI.E.2.g.

VI.G.4.iv. a summary of notifications made, if any, that a groundwater protection standard has been exceeded as defined by Condition VI.I.1.

VI.H. ASSURANCE OF COMPLIANCE

VI.H.1. The Permittee shall assure that monitoring and corrective action measures necessary to achieve compliance with the groundwater protection standard are taken during the term of the permit.

VI.I. SPECIAL REQUIREMENTS IF GROUNDWATER PROTECTION STANDARD IS EXCEEDED

VI.I.1. The Permittee shall notify the Executive Secretary in writing, within seven days, if a groundwater protection standard has been exceeded at any monitoring well. The notification shall indicate which limits have been exceeded. This notification shall not be required for the following Class 2 parameters listed in Condition VI.L.2: pH, Specific Conductance, TDS, and TSS. A groundwater protection standard shall be determined to be exceeded if any of the following criteria are met:

VI.I.1.a. The analytical value for any hazardous waste constituent exceeds the concentration limit listed in Condition VI.L.1 or Condition VI.L.2. (excluding those listed in Condition VI.I.1).

VI.I.1.b. Any hazardous waste constituent analytical value is determined to be a statistically significant increase over the BDLVs outlined in Condition VI.F.5.

VI.I.2. For any well where one or more parameters is found to exceed a groundwater protection standard, the well shall be resampled within 30 days of notification to the Executive Secretary, unless the Executive Secretary has determined that resampling is not necessary.

VI.I.3. The Permittee may choose to resample immediately upon receipt of initial data results, where exceedences of the groundwater protection standard are indicated. A copy of the initial data shall be provided along with the resampling data to the Executive Secretary.

VI.I.4. Resampling need only take place for those compounds and at those wells where exceedences of the groundwater protection standard are indicated.

VI.I.5. If the analysis for the resampled well or wells indicates exceedance of the groundwater protection standard, the Permittee shall resample again not more than three months following the original semi-annual sampling event. The Permittee shall provide the results within 60 days of sampling to the Executive Secretary.

- VI.I.6. If the analysis of the third consecutive sample exceeds the concentration limits listed in Condition VI.L.1 or Condition VI.L.2 (excluding those listed in Condition VI.I.1), the Permittee shall determine if the constituents are from a unit. The Permittee may make a demonstration that the groundwater protection standard was exceeded due to sources other than a regulated unit or errors in sampling, analysis, or evaluation as follows:
- VI.I.6.a. The Permittee shall notify the Executive Secretary in writing, within seven days of receiving the third sample results, that a demonstration will be made.
- VI.I.6.b. The Permittee shall submit a report to the Executive Secretary, within 90 days of notification under Condition VI.I.6.a, that demonstrates that a source other than a unit caused the groundwater protection standard to be exceeded or that the apparent non-compliance was a result of an error in sampling, analysis or evaluation.
- VI.I.6.c. The Permittee shall continue compliance monitoring in accordance with Condition VI.J until receiving written notification from the Executive Secretary that detection monitoring may resume.
- VI.I.7. If the constituents are from a unit, the Permittee shall institute a Compliance Monitoring Program in accordance with Condition VI.J and a Corrective Action Program in accordance with Condition VI.K.
- VI.I.8. If the constituents are not from a unit, the Permittee shall continue quarterly compliance monitoring until the source of detected constituents is determined.
- VI.J. COMPLIANCE MONITORING REQUIREMENTS
- VI.J.1. The Compliance Monitoring Program and assessment shall begin for monitoring wells at the time the third sample exceeds a groundwater protection standard in accordance with Condition VI.I.7. The Compliance Monitoring Program shall continue until the Permittee demonstrates that the groundwater protection standard in Condition VI.D has not been exceeded at the compliance point(s) for three consecutive years.
- VI.J.2. Within 90 days of the determination that a Compliance Monitoring Program is required, the Permittee shall submit to the Executive Secretary a Class 3 modification to establish a Compliance Monitoring Program meeting the requirements of UAC R315-8-6.10 for the unit showing evidence of contamination. The modification shall include, at a minimum, the following information:

- VI.J.2.a. Identification of the concentration of any UAC R315-50-10 constituents found in the groundwater at each monitoring well;
- VI.J.2.b. Proposed changes to the groundwater monitoring network necessary to meet the requirements of UAC R315-8-6.10;
- VI.J.2.c. Proposed changes to the monitoring frequency, sampling and analysis procedures used at the Facility necessary to meet the requirements of UAC R315-8-6.10; and
- VI.J.2.d. For each hazardous constituent found at the compliance point, a proposed concentration limit or a notice of intent to seek an alternate concentration limit under UAC R315-8-6.5(b).
- VI.J.2.e. The Permittee shall assure that monitoring and corrective action measures necessary to achieve compliance with the groundwater protection standards of UAC R315-8-6.3 and Condition VI.D of this module, are taken during the term of the permit modification.
- VI.J.3. Within 180 days of the notice to seek an alternate concentration limit, the Permittee shall submit to the Executive Secretary all data necessary to justify any alternate concentration limit sought under UAC R315-8-6.5(b).
- VI.J.4. The Compliance Monitoring Program shall consist of quarterly sampling of Class 1 and Class 2 parameters and annual sampling for UAC R315-50-10 hazardous constituents. The initial sampling for these parameters shall be conducted within 120 days of entry into the Compliance Monitoring Program.
- VI.J.5. Following the first sampling event for UAC R315-50-10 constituents, sampling shall occur during the first quarter of each year.
- VI.J.6. The Executive Secretary may require any additional field tests, monitoring well installation, or further analytical tests necessary to adequately assess the horizontal and vertical rate and extent of migration of the contaminants, including the unsaturated zone routes of migration.
- VI.J.7. If any regulated unit or solid waste management unit within a waste management area is determined to be the source of hazardous constituents in groundwater, the unit shall be closed, repaired, or otherwise managed in accordance with any relevant specific conditions of this permit for a unit requiring action in the event of groundwater contamination.
- VI.K. CORRECTIVE ACTION REQUIREMENTS
- VI.K.1. If a Corrective Action Program is required under Condition VI.I.7, the Permittee shall take corrective action to ensure that units under these requirements are in

compliance with the groundwater protection standard in accordance with Condition VI.D.

- VI.K.2. The Permittee shall implement a Corrective Action Program that prevents hazardous constituents from exceeding the respective limits at the compliance point(s) by removing the hazardous constituents or treating them in place. A Class 3 permit modification that specifies the measures to be taken shall be submitted to the Executive Secretary within 180 days of determination that corrective actions are necessary.
- VI.K.3. In conjunction with a Corrective Action Program, the Permittee shall establish and implement a Groundwater Monitoring Program to demonstrate the effectiveness of the Corrective Action Program. The Groundwater Monitoring Program may be based on the requirements for a Compliance Monitoring Program as specified in Condition VI.J.
- VI.K.4. The Permittee shall report semi-annually in writing to the Executive Secretary on the effectiveness of the Corrective Action Program.
- VI.K.5. The Permittee shall continue corrective action measures for as long as necessary to achieve compliance with the groundwater protection standard.
- VI.K.6. If the Permittee determines that the Corrective Action Program is no longer needed or no longer satisfies the requirements of this section, the Permittee shall, within 90 days, submit a Class 3 permit modification request to the Executive Secretary to modify or terminate the Corrective Action Program. Corrective action measures under this permit may be terminated once the concentration of hazardous constituents meet the criteria set forth in Condition VI.D for three consecutive years.
- VI.K.7. The Permittee shall institute the Corrective Action Program as necessary to protect human health and the environment from all releases of hazardous waste or constituents from any Solid Waste Management Unit at the Facility, regardless of the time at which the waste was applied in the unit. This requirement shall remain in force for the life of the permit and through the closure/post-closure periods for all regulated units at the Facility.
- VI.L. GROUNDWATER MONITORING PARAMETERS
- VI.L.1. Class 1 Groundwater Monitoring Parameters are provided in Table VI-1.
- VI.L.2. Class 2 Groundwater Monitoring Parameters are provided in Table VI-2.

Table VI-1
CLASS 1 GROUNDWATER MONITORING PARAMETERS

<u>Hazardous Waste Constituent</u>	<u>Test Method (or most current SW846 Method)</u>	<u>PQL (Practical Quantitation Limit (µg/l)</u>	<u>Concentration limit (µg/l)</u>	<u>Hazardous Waste Constituent</u>	<u>Test Method (or most current SW846 Method)</u>	<u>PQL (Practical Quantitation Limit (µg/l)</u>	<u>Concentration limit (µg/l)</u>
Acenaphthene	8270C	10	10	Carbon disulfide	8260B	5	5
Acenaphthylene	8270C	10	10	Carbon tetrachloride	8260B	5	5
Acetone	8260B	25	100	p-Chloroaniline	8270C	10	20
Acetophenone	8270C	10	10	Chlorobenzene	8260B	5	5
2-Acetylaminofluorene: 2-AAF	8270C	10	10	Chlorobenzilate (4-chloro-3-methyl phenol)	8270C	30	10
Acrolein	8260B	200	200	p-Chloro-m-cresol	8270C	25	25
Acrylonitrile	8260B	20	20	Chloroethane; Ethyl chloride	8260B	10	10
Aldrin	8081A	10	10	Chloroform	8260B	5	5
Allyl chloride	8260B	20	100	2-Chloronaphthalene	8270C	10	10
4-Aminobiphenyl	8270C	10	10	2-Chlorophenol	8270C	25	10
Aniline	8270C	10	10	4-Chlorophenyl phenyl ether	8270C	10	10
Anthracene	8270C	10	10	Chloroprene	8260B	200	200
Aramite	8270C	10	10	Chrysene	8270C	10	10
Benzene	8260B	5	5	m-Cresol	8270C	25	25
Benzo(a)anthracene;	8270C	10	10	O-Cresol	8270C	25	25
Benzanthracene							
Benzo(b)fluoranthene	8270C	10	10	p-Cresol	8270C	25	25
Benzo(k)fluoranthene	8270C	10	10	4,4'- DDD	8081A	0.20	10
Benzo(ghi)perylene	8270C	10	10	4,4'- DDE	8081A	0.20	10
Benzo(a)pyrene	8270C	10	10	4,4' - DDT	8081A	0.20	10
Benzyl alcohol	8270C	25	25	Diallate	8270C	20	20
Bis(2-chloroethoxy)methane	8270C	50	50	Dibenz(a,h)anthracene	8270C	10	10
Bis(2-Chloroethyl)ether	8270C	10	10	Dibenzofuran	8270C	10	10
Bis(2-chloro-1-methylethyl)ether	8270C	10	10	Dibromochloromethane;	8260B	5	5
2,2'-Dichlorodiisopropyl ether				Chlorodibromomethane			
Bis(2-ethylhexyl)phthalate	8270C	10	10	1,2-Dibromo-3-chloropropane;	8260B	5	5
				DBCP			
Bromodichloromethane	8260B	5	5	1,2 - Dibromoethane; Ethylene	8260B	5	5
				dibromide			
Bromoform: Tribromomethane	8260B	5	5	Di-n-butyl phthalate	8270C	25	25
4-Bromophenyl phenyl ether	8270C	10	10	O-Dichlorobenzene	8260B	10	10
Butyl benzyl phthalate; Benzyl buthalate	8270C	25	25	m-Dichlorobenzene	8260B	10	10

<u>Hazardous Waste Constituent</u>	<u>Test Method (or most current SW846 Method)</u>	<u>PQL (Practical Quantitation Limit (µg/l))</u>	<u>Concentration limit (µg/l)</u>	<u>Hazardous Waste Constituent</u>	<u>Test Method (or most current SW846 Method)</u>	<u>PQL (Practical Quantitation Limit (µg/l))</u>	<u>Concentration limit (µg/l)</u>
p-Dichlorobenzene	8260B	10	75	Endosulfan sulfate	8081A	0.10	10
3,3' - Dichlorobenzidine	8270C	10	20	Endrin aldehyde	8081A	0.10	10
trans - 1,4-Dichloro-2-butene	8260B	20	20	Ethylbenzene	8260B	5	5
Dichlorodifluoromethane	8260B	5	5	Ethyl methacrylate	8260B	20	10
1,1 - Dichloroethane	8260B	5	5	Ethyl methanesulfonate	8270C	10	10
1,2-Dichloroethane; Ethylene dichloride	8260B	5	5	Famphur	8270C	10	10
1,1 - Dichloroethene; Vinylidene chloride	8260B	5	5	Fluoranthene	8270C	10	10
trans-1,2-Dichloroethylene	8260B	5	5	Fluorene	8270C	10	10
2,4-Dichlorophenol	8270C	25	10	Heptachlor	8081A	0.10	10
2,6-Dichlorophenol	8270C	25	25	Heptachlor epoxide	8081A	0.10	10
1,2'-Dichloropropane	8260B	5	5	Hexachlorobenzene	8270C	10	10
cis-1,3-Dichloropropene	8260B	5	5	Hexachlorobutadiene	8270C	10	10
trans-1,3-Dichloropropene	8260B	5	5	Hexachlorocyclopentadiene	8270C	20	10
Dieldrin	8081A	10	10	Hexachloroethane	8270C	10	10
Diethyl phthalate	8270C	10	10	Hexachlorophene	8270C	400	400
0,0-Diethyl 0-(2-pyrazinyl) phosphorothiosate; Thionazi	8270C	10	10	Hexachloropropene	8270C	10	10
Dimethoate	8270C	200	100	2-Hexanone	8260B	20	50
p-(Dimethylamino)azobenzene	8270C	10	10	Indeno(1,2,3-cd)pyrene	8270C	10	10
7,12-Dimethylbenz(a)anthracene	8270C	10	10	Isodrin	8081A	0.10	10
3,3'-Dimethylbenzidine	8270C	10	10	Isophorone	8270C	10	10
alpha, alpha-Dimethylphenethylamine	8270C	40	20	Isosafrole	8270C	10	10
2,4-Dimethylphenol	8270C	25	25	Kepone	8270C	100	100
Dimethyl phthalate	8270C	10	10	Methacrylonitrile	8260B	20	20
m-Dinitrobenzene	8270C	10	10	Methapyrilene	8270C	20	20
4,6-Dinitro-o-cresol (4,6-Dinitro-2-Methylphenol)	8270C	50	50	Methoxychlor	8081A	0.10	100
2,4 Dinitrophenol	8270C	25	50	Methyl bromide; Bromomethane	8260B	5	5
2,4-Dinitrotoluene	8270C	10	10	Methyl chloride; Chloromethane	8260B	5	5
2,6-Dinitrotoluene	8270C	10	10	3-Methylcholanthrene	8270C	10	10
Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	8270C	40	160	Methylene bromide;	8260B	5	5
Di-n-octyl phthalate	8270C	10	10	Dibromomethane			
Diphenylamine	8270C	10	10	Methylenedichloride; Dichlormethane	8260B	5	5
Disulfoton	8270C	20	10	Methyl ethyl ketone; MEK	8260B	25	100
				Methyl iodide; Iodomethane	8260B	20	20

<u>Hazardous Waste Constituent</u>	<u>Test Method (or most current SW846 Method)</u>	<u>PQL (Practical Quantitation Limit (µg/l)</u>	<u>Concentration limit (µg/l)</u>	<u>Hazardous Waste Constituent</u>	<u>Test Method (or most current SW846 Method)</u>	<u>PQL (Practical Quantitation Limit (µg/l)</u>	<u>Concentration limit (µg/l)</u>
Methyl methacrylate	8260B	20	20	Phenol	8270C	25	25
Methyl methanesulfonate	8270C	10	10	p-Phenylenediamine	8270C	100	100
2-Methylnaphthalene	8270C	10	10	Phorate	8270C	20	15
Methyl parathion; Parathion methyl	8270C	20	20	2-Picoline	8270C	10	10
4-Methyl-2-pentanone; Methyl isobutylketone	8260B	12.5	200	Polychlorinated Biphenyls (Sum of Aroclors)	8082	7	7
Naphthalene	8270C	10	10	Pronamide	8270C	10	10
1,4-Naphthoquinone	8270C	20	10	Propionitrile; Ethyl cyanide	8260B	250	250
1-Naphthylamine	8270C	10	10	Pyrene	8270C	10	10
2-Naphthylamine	8270C	10	10	Pyridine	8270C	10	5
O-Nitroaniline	8270C	10	50	Safrole	8270C	10	10
m-Nitroaniline	8270C	10	50	Styrene	8260B	5	5
p-Nitroaniline	8270C	10	50	1,2,4,5-Tetrachlorobenzene	8270C	10	10
Nitrobenzene	8270C	10	10	1,1,1,2-Tetrachloroethane	8260B	5	5
O-Nitrophenol	8270C	25	25	1,1,2,2-Tetrachloroethane	8260B	5	5
p-Nitrophenol	8270C	25	50	Tetrachloroethylene; Perchloroethylene; Tetrachloroethene	8260B	5	5
4-Nitroquinoline 1-oxide	8270C	100	50	2,3,4,6-Tetrachlorophenol	8270C	20	10
N-Nitrosodi-n-butylamine	8270C	10	10	Tetraethyl dithiopyrophosphate; Sulfotep	8270C	10	10
N-Nitrosodiethylamine	8270C	10	10	Toluene	8260B	5	5
N-Nitrosodimethylamine	8270C	10	10	o-Toluidine	8270C	10	10
N-Nitrosodiphenylamine	8270C	10	10	1,2,4-Trichlorobenzene	8270C	10	10
N-Nitrosodipropylamine; Di-n- propylnitrosamine	8270C	10	10	1,1,1-Trichloroethane; Methylchloroform	8260B	5	10
N-Nitrosomethylethylamine	8270C	10	10	1,1,2-Trichloroethane	8260B	5	5
N-Nitrosomorpholine	8270C	10	10	Trichloroethylene; Trichloroethene	8260B	5	5
N-Nitrosopiperidine	8270C	10	10	Trichlorofluoromethane	8260B	5	5
N-Nitrosopyrrolidine	8270C	10	10	2,4,5-Trichlorophenol	8270C	25	25
5-Nitro-o-toluidine	8270C	10	10	2,4,6-Trichlorophenol	8270C	25	25
Parathion	8270C	30	30	1,2,3-Trichloropropane	8260B	5	5
Pentachlorobenzene	8270C	10	10	O,O,O-Triethyl phosphorothioate	8270C	10	10
Pentachloroethane	8260B	100	100	sym-Trinitrobenzene	8270C	10	10
Pentachloronitrobenzene	8270C	10	10	Vinyl acetate	8260B	5	5
Pentachlorophenol	8270C	25	50	Vinyl chloride	8260B	5	2
Phenacetin	8270C	10	10	Xylene (total)	8260B	15	15
Phenanthrene	8270C	10	10				

Table VI-2
CLASS 2 GROUNDWATER MONITORING PARAMETERS

<u>Hazardous Waste Constituent</u>	<u>Test Method (or most current SW846 Method)</u>	<u>PQL (Practical Quantitation Limit (µg/l)</u>	<u>Concentration limit (µg/l)</u>	<u>Hazardous Waste Constituent</u>	<u>Test Method (or most current SW846 Method)</u>	<u>PQL (Practical Quantitation Limit (µg/l)</u>	<u>Concentration limit (µg/l)</u>
Antimony	6010B	300	300	Selenium	6010B	100	100
	7040	300	300				
Arsenic	6010B	100	500	Silver	7760A	70	70
	7060A	500	500		6010B	15	400
Barium	6010B	20	2000	Sulfide	EPA 376.1	3,500	3,500
	7080A	100	2000		EPA 376.2		
Beryllium	6010B	2	3	Thallium	9030B		
	7090	5	5		6010B	100	400
Cadmium	6010B	10	40	Vanadium	7840	400	400
	7130	40	40		6010B	15	80
Chromium	6010B	70	70	Zinc	7910	200	200
	7190	70	70		6010B	250	250
Cobalt	6010B	10	70	Ph	7950	20	20
	7200	70	70		EPA 150.1	N/A	N/A
Copper	6010B	50	60	Specific Conductance	9040B		
	7210	60	60		EPA 120.1	N/A	N/A
Lead	6010B	80	80	Total Dissolved Solids (TDS)	9050B		
	7420	100	100		EPA 160.1	50,000	50,000
Mercury	7470	0.5	2	Total Suspended Solids (TSS)	EPA 160.2	50,000	50,000
Nickel	6010B	50	50				
	7520 OR 7521	50	50				

END OF MODULE VI